Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

Claim 1. (Previously Presented) A method for generating a data compression dictionary in a DOCSIS network, comprising the steps of:

i. identifying a plurality of frequently occurring data strings transmitted by a plurality of cable modems in the DOCSIS network;

ii. assigning a token to represent each one of the plurality of frequently occurring data strings;

iii. entering each one of the plurality of frequently occurring data strings and each token assigned to represent each one of the plurality of frequently occurring data strings into a lookup table to produce a data compression dictionary; and

iv. transmitting the data compression dictionary to the plurality of cable modems in the DOCSIS network.

Claim 2. (Previously Presented) The method of claim 1, further comprising repeating steps i.-iv. for each of a plurality of DOCSIS networks, thereby generating a plurality of data compression dictionaries, each of which is individually tuned for a corresponding one of the plurality of DOCSIS networks.

Claim 3. (Currently amended) A method for transmitting compressed data packets in a DOCSIS network, comprising the steps of:

i.   receiving a plurality of data packets for transmission, wherein each of said data packets has a payload portion comprised of one or more data strings;

ii.   identifying which of said data packets has a payload portion that can be compressed;

iii.   for each of said data packets identified in said step (b), replacing each of said one or more data strings contained in said payload portion with a token from [[said]] a data compression dictionary assigned to represent said one or more data strings, wherein said data compression dictionary is tuned to data transmitted by a plurality of cable modems on the DOCSIS network;

iv.   appending a compression indicator to each of said tokens within each of said data packets; and

v.   transmitting said data packets within a DOCSIS service identifier.

Claim 4. (Original) The method of claim 3 wherein the token is a binary string.

Claim 5. (Original) The method of claim 4 wherein the compression indicator indicates the length of the binary string.

Claim 6. (Original) The method of claim 3 wherein said data compression dictionary is pre-defined and fixed.

Claim 7. (Previously Presented) A method for expanding a PDU data string transmitted over a DOCSIS network, comprising the steps of:

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i.   receiving a plurality of data packets transmitted within a DOCSIS service identifier, wherein each of said data packets has a payload portion;

ii.   identifying each of said plurality of data packets having a compression indicator appended to one or more tokens within said payload portion; and

iii.   for each of said data packets identified in said step (b), replacing each of said one or more tokens contained within said payload portion with a data string assigned to represent said one or more tokens found in a data compression dictionary, wherein said data compression dictionary is tuned to data transmitted by a plurality of cable modems on the DOCSIS network.

Claim 8. (Original) The method of claim 7, wherein the token is a binary string.

Claim 9. (Original) The method of claim 8, wherein the compression indicator identifies the length of the binary string.

Claim 10. (Previously Presented) The method of claim 1, further comprising:

v.   updating the data compression dictionary; and

vi.   transmitting the updated data compression dictionary to the plurality of cable modems in the DOCSIS network.

Claim 11. (Previously Presented) The method of claim 1, further comprising:

v.   transmitting the data compression dictionary to a new cable modem responsive to the new cable modem being connected to the DOCSIS network.

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